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EXAMINER

CAO, DIEM K

ART UNIT PAPER NUMBER

2126

DATE MAILED: 03/01/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

09/504,531

Applicant(s)

CARON ET AL.

Examiner

Dien K Cao

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 21 November 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 11-57 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 11-57 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

### **DETAILED ACTION**

1. This Office action is in response to the Request for Continued Examination Under 37 CFR 1.114 filed on 11/21/2003.
2. Claims 11-57 remain in the application. Applicant has amended claims 11-12, 16-17, 20, 27, 31-32, 36, 40, 44-45, 48-49, and 52-56.

#### ***Continued Examination Under 37 CFR 1.114***

3. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 11/21/2003 has been entered.

#### ***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 11-14, 16-19, 48-51, and 53-57 are rejected under 35 U.S.C. 103(a) as being unpatentable over Piskiel et al. (U.S. 5,893,911) in view of Feridun et al. (U.S. 6,336,139 B1).

6. As to **claim 11**, Piskiel teaches receiving a message in a queue (a publishing application ... queue 212; col. 7, lines 45-64), wherein the queue is associated with at least one rule (rules based message distribution 204, rule bases, subscription rules; col. 7, line 45 - col. 8, line 67) and each rule at least specifies a condition (rule clause; col. 8, line 51 - col. 9, line 34) and specifies an action (a single published message instance ... perform a specific action; col. 9, lines 35-46), and the action specified by each rule is capable of being different for each rule (a single message instance may trigger several rules, each of which is defined to perform a specific action; col. 9, lines 35-65), checking whether the condition specified by the at least one rule of the trigger associated with the queue is satisfied by the message (when the identified ... evaluate to TRUE; col. 9, lines 1-34), and upon determining that the condition of the rule is satisfied by the message, performing the action of the rule (the particular action ... to be performed; col. 9, 1-34).

7. However, Piskiel does not teach the queue is associated with at least one trigger. Feridun teaches the queue is associated with at least one trigger (input queue, correlation rule; col. 8, line 15 – col. 9, line 57 and a correlation rule is implemented as a Java bean wrapped around a rule object; col. 11, lines 32-37).

8. It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teaching of Piskiel and Feridun because it improves the flexible of the system by dynamically deployed into a distributed computing environment.

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9. **As to claim 12**, Piskiel teaches performing the action specified by the rule comprises activating each of at least one module referenced by the rule (a single published message ... performed; col. 9, lines 35-67).

10. **As to claim 13**, Piskiel teaches (col. 9, line 62 – col. 10, line 15) each module comprises one of a software component (logging or recording information about the transaction in a file or database, address of a desired target computing process) and an executable program file (initiating execution of a new application, name of a process).

11. **As to claim 14**, Piskiel teaches activating each of at least one module referenced by the rule comprises passing the message to the module (send a transaction message to a subscribing process/application program; col. 9, lines 35-65).

12. **As to claim 16**, Piskiel teaches the at least one rule comprises a short-circuit rule, such that satisfaction by the message received in the queue of the condition specified by the rule causes checking for satisfaction of the condition of any non-checked rules of the at least one rule to stop (the rule clause is ignored for ... table entry; col. 8, lines 51-67).

13. **As to claim 17**, Piskiel does not teach the at least one rule comprises a destructive rule, such that satisfaction by the message received in the queue of the condition specified by the rule removes the message from the queue. Feridun teaches the at least one rule comprises a destructive rule, such that satisfaction by the message received in the queue of the condition

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specified by the rule removes the message from the queue (consume the event; col. 12, lines 10-20).

14. **As to claim 18**, Piskiel teaches checking is performed in a serial manner (Element 800 is first ... published message; col. 16, lines 27 - 67).

15. **As to claim 19**, Piskiel does not teach checking is performed in a concurrent manner. Piskiel teaches checking is performed in a serial manner (Element 800 is first ... published message; col. 16, lines 27 - 67). It would have been obvious to one of ordinary skill in the art to modify the system of Piskiel to have the checking performed in the serial manner because it will improve the performance of the system.

16. **As to claim 48**, see rejection of claim 11 above. Piskiel further teaches receiving as part of a transaction a message in a queue (transaction processing application; col. 6, lines 29-46 and published message ... queue; col. 7, lines 45-64).

17. **As to claims 49-51**, see rejections of claims 12-14 above.

18. **As to claim 53**, see rejection of claim 16 above.

19. **As to claim 54**, Piskiel teaches the at least one rule comprises an ordered set of rules (rule, rule clauses; col. 8, lines 51-67), the ordered set of rules comprises an ordered set of

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checked rules (check the msg\_id field, rule clauses; col. 8, lines 51-67), the ordered set of checked rules are checked in order (check the msg\_id field first, if the msg\_id field value corresponding to the msg\_id field of the rules arguments table entry, then the message is checked against the rule clause; col. 8, lines 51-67), the order set of checked rules comprises a short circuit rule, and the action specified by the short circuit rule comprises stopping the checking of any rules in the ordered set of checked rules subsequent to the short circuit rule (the rule clause is ignored for ... table entry; col. 8, lines 51-67).

20. **As to claim 55**, see rejection of claim 17 above.

21. **As to claim 56**, Piskiel teaches the at least one rule comprises an ordered set of rules (rule, rule clauses; col. 8, lines 51-67), the ordered set of rules comprises an ordered set of checked rules (check the msg\_id field, rule clauses; col. 8, lines 51-67), the ordered set of checked rules are checked in order (check the msg\_id field first, if the msg\_id field value corresponding to the msg\_id field of the rules arguments table entry, then the message is checked against the rule clause; col. 8, lines 51-67).

22. **As to claim 57**, Piskiel teaches the at least one rule comprises an ordered set of rules (rule, rule clauses; col. 8, lines 51-67). However, Piskiel does not teach each of the plurality of rules is checked concurrently. Piskiel teaches checking is performed in a serial manner (Element 800 is first ... published message; col. 16, lines 27 - 67). It would have been obvious to one of

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ordinary skill in the art to modify the system of Piskiel to have the checking performed in the serial manner because it will improve the performance of the system.

23. Claims 15, 20-24, 26-37, 39-47, and 52 are rejected under 35 U.S.C. 103(a) as being unpatentable over Piskiel et al. (U.S. 5,893,911) in view of Feridun et al. (U.S. 6,336,139 B1) further in view of Gehani et al. (Event Specification in an Active Object-Oriented Database).

24. **As to claim 15**, Piskiel as modified does not teach the trigger has an enabled state and a disabled state, such that the condition of each of the at least one rule of the trigger is checked for satisfaction by the message received in the queue only when the trigger is in the enabled state. Feridun teaches the trigger has an active and in-active state (col. 11, lines 38-65).

25. Gehani teaches the trigger has an enabled (for each trigger definition ... for storing the state; page 87, right column, second paragraph), and the condition of each of the at least one rule of the trigger is checked for satisfaction by the message received in the queue only when the trigger is in the enabled state (Triggers do not fire unless they are active; page 82, left column).

26. It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teaching of Piskiel, Feridun and Gehani because it provides a method to keep track of the state of the trigger.



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27. **As to claim 20**, see rejection of claims 11 and 15 above. Piskiel further teaches a trigger store (subscriber distribution element 220; col. 7, lines 45-63), a trigger service (the rules based message distribution evaluation technique 204; col. 7, lines 45-63).

28. **As to claim 21**, Piskiel as modified teaches the trigger store corresponds to a particular computer (a publishing application ... distributed element 220; col. 7, lines 45-63) and references each of the at least one trigger within a trigger database (the tables may be implemented utilizing relational database management system; col. 10, lines 55-65).

29. **As to claim 22**, Piskiel teaches the queue comprises data stored on a computer-readable medium (queue 212; col. 7, line 45 - col. 10, line 54).

30. **As to claim 23**, Piskiel as modified teaches each of the at least one trigger store comprises data stored on a computer-readable medium (the tables may be implemented utilizing relational database management system; col. 10, lines 55-65).

31. **As to claim 24**, Piskiel teaches the trigger service comprises a computer program executed by a processor from a computer-readable medium (the rules based message distribution evaluation technique 204; col. 7, lines 45-63).

32. **As to claim 26**, Piskiel as modified teaches the trigger store of the at least one trigger comprises a trigger store of a plurality of ordered triggers (the tables may be implemented

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utilizing relational database management system; col. 10, lines 55-65 and rules, rule clauses; col. 9, line 44 – col. 10, line 25).

33. **As to claim 27**, Piskiel teaches (col. 9, lines 1-67) the trigger service is designed to perform the action associated with a rule by activating each of the module referenced the rule (The action table ... file or database).

34. **As to claim 28**, see rejection of claims 13 and 27 above.

35. **As to claim 29**, see rejection of claim 13 above.

36. **As to claim 30**, see rejections of claims 14 and 27 above.

37. **As to claims 31-34**, see rejections of claims 16-19 above.

38. **As to claim 35**, Piskiel teaches the system comprises at least one computer (system #1, system #2; col. 5, line 61 - col. 6, line 17).

39. **As to claim 36**, it corresponds to the transaction message system of claim 20, and is rejected under the same ground of rejection.

40. **As to claim 37**, see rejections of claim 21 above.

41. **As to claims 39-47**, see rejections of claims 26-34 above.

42. **As to claim 52**, see rejection of claim 15 above.

43. Claims 25 and 38 are rejected under 35 U.S.C. 103(a) as being unpatentable over Piskiel et al. (U.S. 5,893,911) in view of Feridun et al. (U.S. 6,336,139 B1) and Gehani et al. (Event Specification in an Active Object-Oriented Database) further in view of Moore et al. (U.S. 5,630,127).

44. **As to claim 25**, Piskiel does not explicitly teach a trigger manager designed to provide for creating, editing and deleting triggers in a visual, non-programming manner. Moore teaches (col. 5, line 31 - col. 11, line 43) a trigger manager (the GRMS 108) designed to provide for creating, editing and deleting triggers in a visual, non-programming manner. It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teaching of Piskiel, Cohen and Moore because it would provide a method for a business professional, and not a software expert, can create and modified the triggers.

45. **As to claim 38**, see rejection of claim 25 above.

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***Response to Arguments***

46. Applicant's arguments with respect to claims 1-57 have been considered but are moot in view of the new ground(s) of rejection.

***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Diem K Cao whose telephone number is (703) 305-5220. The examiner can normally be reached on Monday - Thursday, 9:00AM - 5:00PM.


If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Meng-Ai An can be reached on (703) 305-9678. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

**Any response to this action should be mailed to:**

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